

1/10

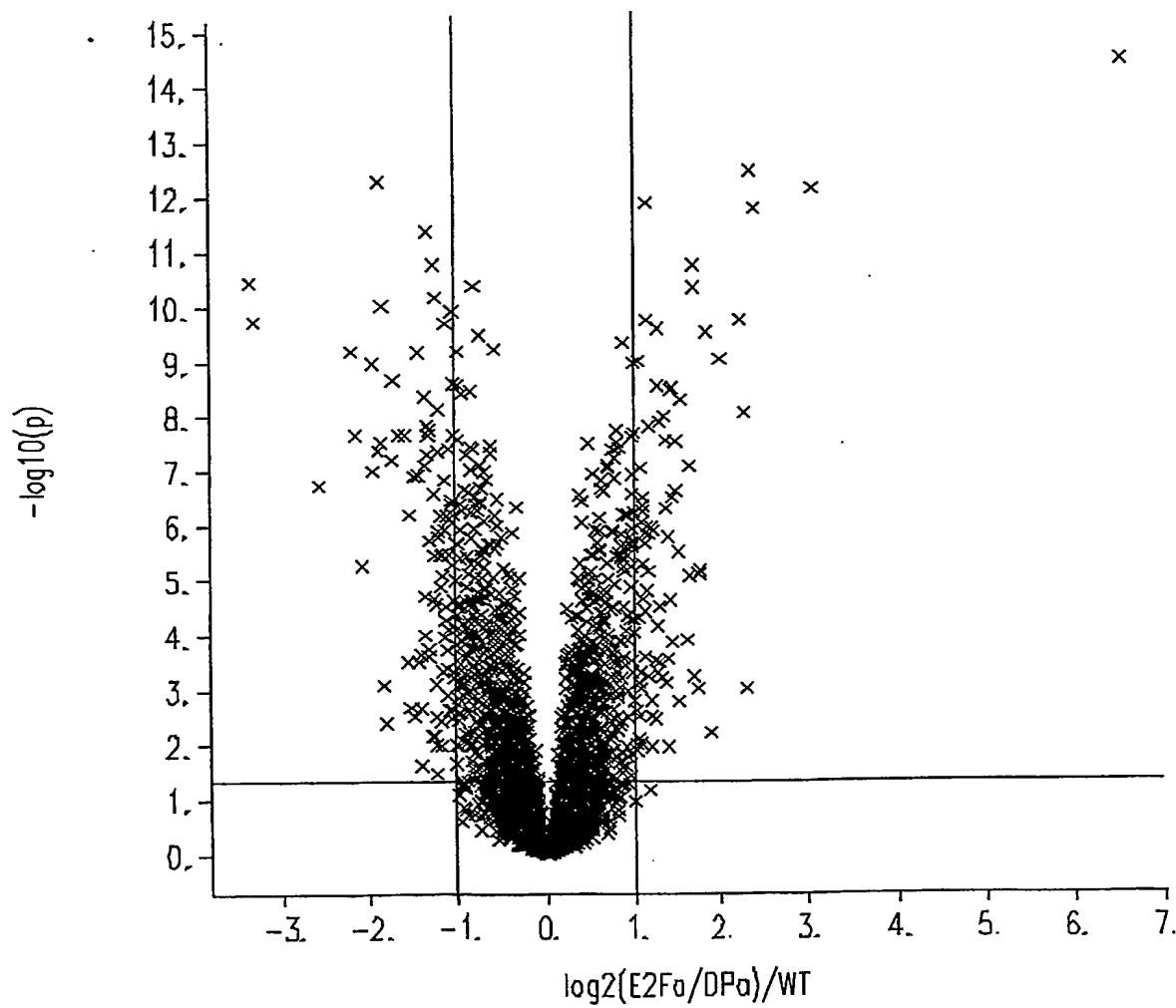


FIGURE 1

BEST AVAILABLE COPY

2/10

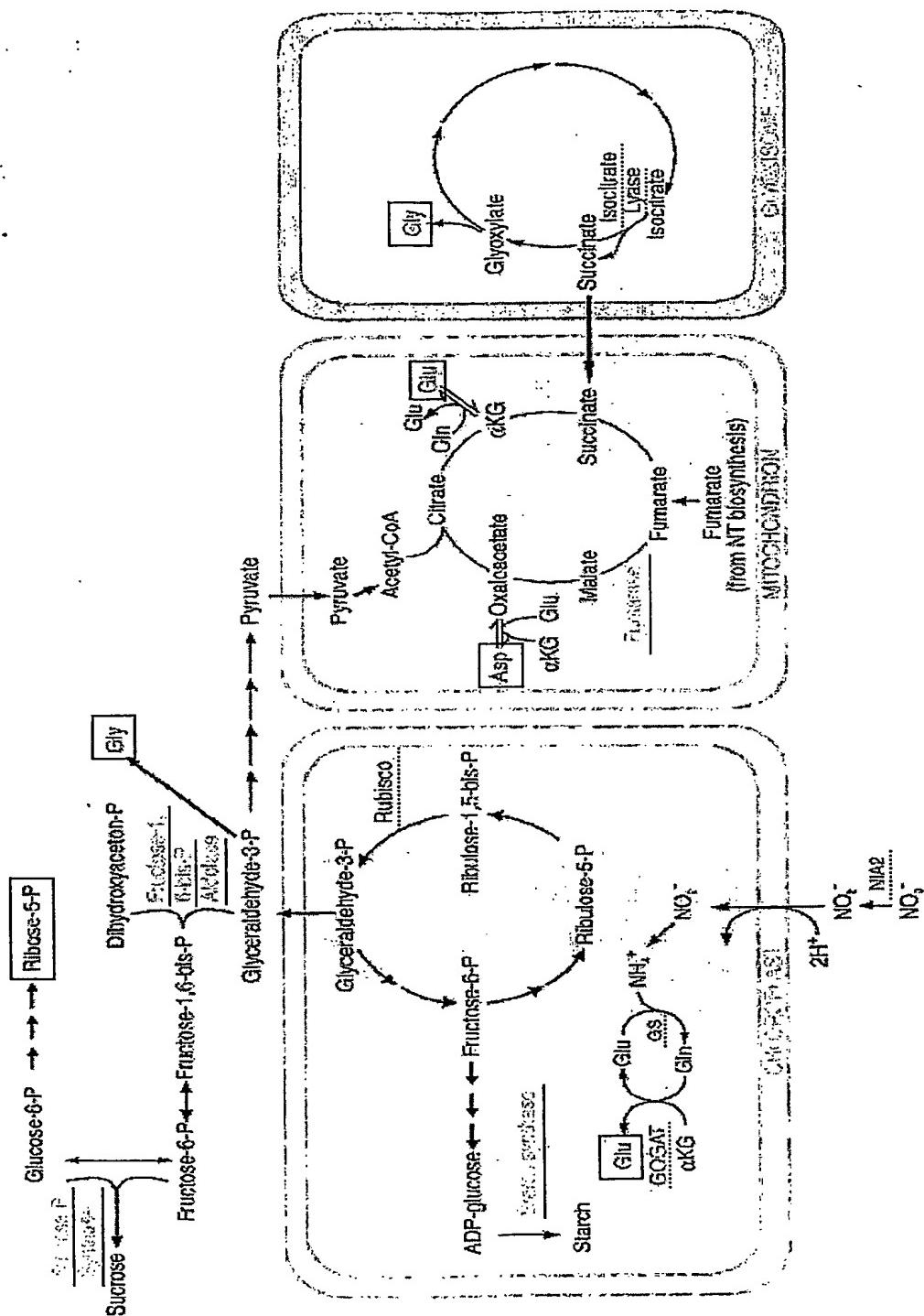
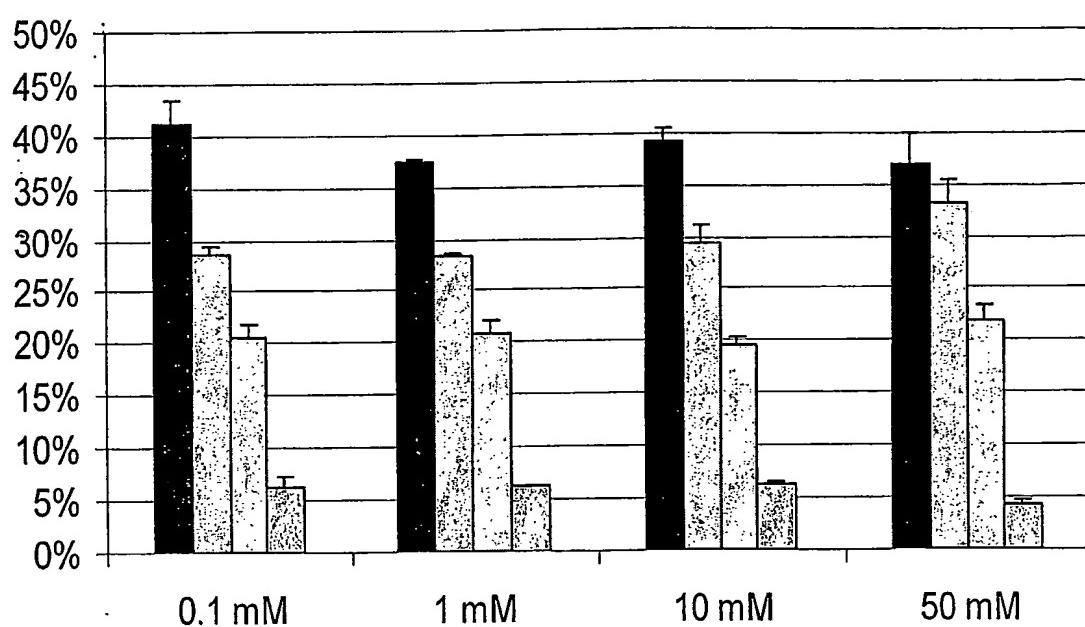
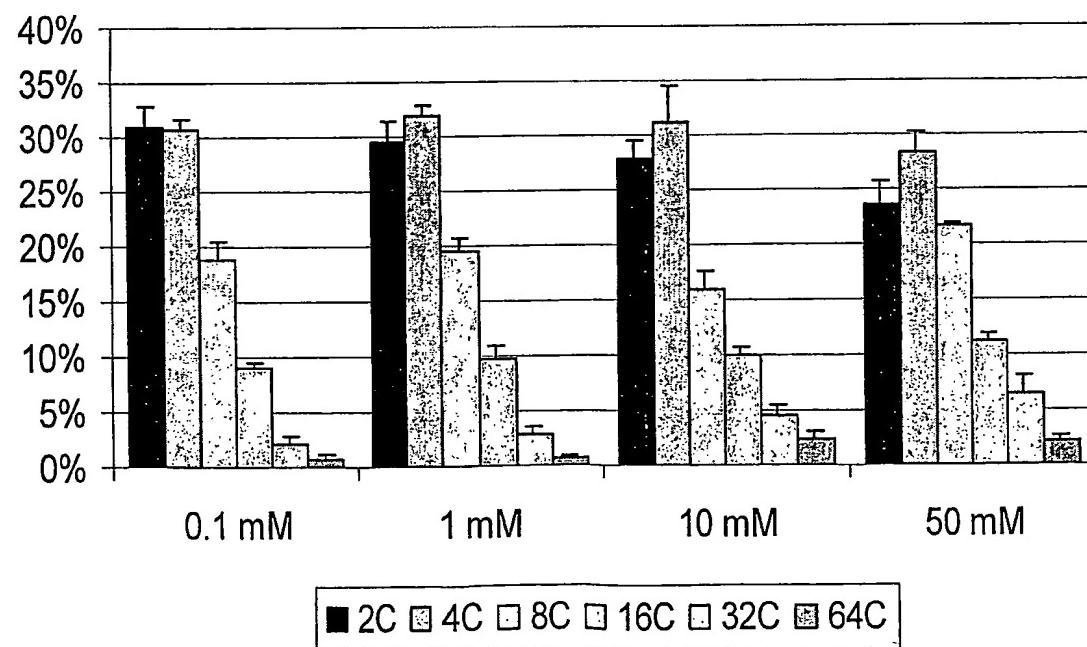


FIGURE 2

3/10

A**B****FIGURE 3**

4/10

MATDB - entry At1g57680 from contig t8l23

http://mips.gsf.de/cgil-bin/proj/lthal/gv_report?t8l23+At1g57680

MATDB - entry At1g57680 from contig t8l23
 (Chromosome 1 / BAC clone T8L23 / sequence database accession EMBL:AC079733)

mips

Type: gene/protein
 Code: At1g57680
 Old code: T8L23_15
 Title: putative protein
 Contig: t8l23
 Position: 53392-54480 (C)

Notes

Classification

- known protein

Functional Category

- UNCLASSIFIED PROTEINS

TargetP prediction

- Targeted to secretory pathway
- TargetP score: 0.968
- TargetP reliability class: 2
- Probable signal sequence length: -

TMHMM transmembrane prediction

- Very likely to be a transmembrane protein (or have a signal peptide) (Exp number of AA in TMHs: 110)
- A transmembrane region could actually be a signal peptide (Exp number, first 60 AAs: 21)
- Orientation of N-terminal: external side (probability: 0.9)
- Transmembrane regions:
 - 40-62
 - 83-100
 - 138-160
 - 181-203
 - 213-235

EMBL

- AY072149

mRNA matches: 1 found

Arabidopsis ESTs

- found 10
AA585779; AI992654; AI998042; AV518701; AV538415; AV538372;
AV541088; AV550688; AV550640; AV554579;

FIGURE 4

5/10

MATDB - entry At1g57680 from config t8l23

http://mlps.gsf.de/cgl-blr/proj/thal/gv_report?t8l23+At1g57680**Full report**

- Full report includes FST matches and external annotation... slow.

Protein properties

PEDANT and Interpro data are being recalculated. To access old PEDANT data, use the link in the left frame, but be aware that some protein sequences have been changed due to update of gene models based on cDNA data and PEDANT data may be outdated.

[Click here](#) to submit new information about this entry

FIGURE 4 (contin.)

6/10

A. thaliana - contig t8123 - entry At1g57680

http://mips.gsf.de/cgi-bin/proj/thal/get_pep?t8123/At1g57680

A. thaliana - contig t8123 - entry At1g57680

mips

```
>P1;At1g57680
putative protein
MPLTKLVPDA FGVVITICLVA LLVLLGLLCI AYSFYFQSHV RKQGYIQQLGY FSGPWIIRIT
FILFAIWAV GEIFRLSLLR RHRRLLSGLD LRWQENVCKW YIVSNLGFAE PCLFLTLMFL
LRAPLKMESG ALSGKWNRDT AGYIILYCLP MIALQLAVVL SESRLNGGSG SYVKLPHDFT
RTYSRVIIDH DEVALCTYPL LSTILLGVFA AVLTAYLFWL GRQILKLVIN KRLQKRVTYL
IFSVSFLPL RIVMLCLSVL TAADKIIFEA LSFLAFLSLF CFCCVVSICLL VYFPVSDSMA
LRGLRDTDDE DTAVTEERSG ALLLAPNSSQ TDEGLSLRGR RDGSSTQER YVELSLFLEA
EN*
C; Length 362 aa
C; Sequence At1g57680 was extracted from t8123
C; Fragment (54480-53392(C))
```

FIGURE 4 (contin.)

7/10

A. thaliana - config t8i23 - coordinates: 53392-54480 (C)

http://mlps.gsf.de/cgi-bin/proj/thal/get_dna.pl?t8i23/C/53392-54480

A. thaliana - config t8i23 - coordinates: 53392-54480 (C)

mlps

```

1 ATGCCCTGAA AAAATTAGT TCCCGATGCA TTGGCGTTG TGACGGATATG TCTAGTCGCT
61 CTGCTAGTTC TTGGGTCT CCTTGTCATC GCTTACTCGT TCTATTCCA GTCTCACGTT
121 CGTAAGCAAG GCTATATTCA ACTTGGTTAC TTCACTGGTC CCTGGATTAT CCGAATCACT
181 TTCATTCCTT TTGCTATCTG GTGGGCCTGTT GGTTGAGATT TTCACTGGAG TTGTTGAGG
241 CGTCACAGAA GGTGTTGAG TGCGTTGGAT CTGAGATGGC AAGAAAACGT TTGCAAGTGG
301 TACATCGTTT CCAATCTAGG ATTGCGGAG CCTTGCTCT TTCTGACTCT CATGTTTCTT
361 CTGGTGTGTC CCGTGAAGAT GGATTCAGGG CCTTTGAGCG GAAAATGGAA CAGGGACACA
421 GCAGGTTATA TTATTCCTTA TTGCTCTCCCG ATGCTTGCTC TTCAACTTGC GGTGTTGTTG
481 TCCGAGTCAC GCCTAAATGG TGCTAGTGGC TCTTATGTAA AGCTGCCACA CGACTTCACA
541 AGAACGTATT CCCGAGTTAT TATTGATCAC GACGAGGGGG CCTTATGAC ATATCCTCTA
601 CTGAGTACCA TCCCTCTGG TGTTTTGCA GCCGTCTAA CAGCTTACTT GTCTGGCTT
661 GGAGGCAGA TACTGAACCT TGTCATTAAC ARGCCTTAC AGAAGAGAGT ATACACTTTG
721 ATATTCCTCG TCTCGAGTTT CCTTCCATTA AGGATTGTTA TGCTCTGTTT GTGGITCTC
781 ACACCGAGCAG ACAGATTTAT ATTGAAAGCC CTTTCTTTCT TGGCCTTCCC CTCCCTCTC
841 TGCTTTGCG TGGTATCCAT CTGCTTGCTT GTCTACTTCC CGGTTTCAGA TTCCATGGCC
901 CTGAGAGGTC TAAGAGACAC AGATGATGAG GATACGGCTG TGACCGAAGA ACGCAGTGTT
961 GCTCTGTTAC TTGCAACCAA CTCTTCACAA ACTGATGAGG GATTGAGCTT AAGAGGTGG
1021 AGAGACTCGG GATCGTCTAC ACAGGAGAGG TATGTGGAAC TCAGCCTATT TCTGGAAGCT
1081 GAGAACTAA

```

FIGURE 4 (contin.)

8/10

A. thaliana - contig t8l23 - coordinates: 53392-54480 (C)

http://mlps.gsf.de/cgi-bin/proj/th..._gendna.pl?l8l23/C/53392-54480/500

A. thaliana - contig t8l23 - coordinates: 53392-54480 (C)

mlps

```

1 gtattatctc ttgagattct gtgtttsaag gttatgactt ggctttatgt atttcaataat
61 tgttattgtt ttgttgttttta atcatcttaa ttttcagaagg tgcttttagtt ttgagaaagg
121 ttatgacttt ttaagatctc yyggttaasat gggtttagat gttttttttt ctaatttttg
181 qtatattgg taagttttg attattttgtt gttttgttta gtttatgttag qtaacacgc
241 tatcaagttg taaagatctc agatcacaaa aagtcttacc ggtgtatctg ggctgtttt
301 ttttgttaatc taatttgaga aacttttgctc tgacttggat agtttcttgc aagggttcaat
361 cttttccgt ttttcatcaa tyagatgtaa staatctggaa aatkttgtgg yagagaaagg
421 qcacatttgc a tgcatttgc tagagaacgt ttctgcatttgc atgtctggtag agagcatgc
481 tggatactgt gttttgggtt ATGGCCCTGCA CAAATTAGT TCCCGATGCA TTGGCGTGTG
541 TGACGATATG TCTAGTCGT CTGGTAGITTC TTTTGGGTCT CCTTTCGATE GCTTACTCGT
601 TCTATTCCA GTCTCACGT CGTAGACAG AGCTATTCAG ACTTGGTAC ITTCAGTGGTC
661 CCTGGATTAT CGGAATCACT TTCAATTCTCT TGCTATCTG GTGGCTGTT GGTGAGATT
721 TTCGATTGAG TTGTTGAGG CGTCACAGAAA GTTGTGAGG TGGGTGAGAT CTGAGATGGC
781 AAAAAAACGT TTGCAAGTGG TACATCGTTT CCATCTAGG ATTGCGGAG CTTTGTCTC
841 TTCTGACTCT CATGTTTCTT CTGCGTGTC CTTGAGAT GGAATCAGGG GCTTGTGAGCG
901 GAAAATGCAA CAGGACACAA GCAGGTTATA TTATCTTTA TTGTCTCCCC ATGCTTGCCTC
961 TTCAACTTGC GGTGTTGTT TCCGAGTCAC GCTTAAATGG TTGTAGTGGC TCTTATGTA
1021 AGCTGCCACA CGACTTCACA AGAACGTATT CCCGAGTTAT TATGATCAC GACGGAGGTGG
1081 CCTTATGAC ATATCTCTCA CTGAGTACCA TCCCTCTGG TTGTTTGCAGA GCGGTCTCAA
1141 CAGCTTACTT GTCTGGCTT GGAGGGCAGA TACTGAAACT TGTCATTAAC AAGCGTTTAC
1201 AGAAGAGAGT ATACACTTGT ATATTCCTGG TTCTGAGTTT CCTTCCATTA AGGATTTGTTA
1261 TGCTCTGTTT GTCGTTCTC ACAGCAGCAG ACAAGATTAT ATTCAAGGCC CTTTCTTTCT
1321 TGGCCTTCTC CTCCCCTCTC TGCTTTGGC TTGTATTCAT CTGCTTGCTT GTCTACTTCC
1381 CGGTTTCAGA TTCCATGGCC CTGAGAGGTC TAAGAGACAC AGATGATGAG GATACGGCTG
1441 TGACCGAARGA ACGCAGTGGT GCTCTGTTAC TTGCAACAAA CTCTTCACAA ACTGATGAGG
1501 GATTGAGCTT AAGAGOTCGG AGAGACTCGG GATCGCTAC ACAGGAGAGG TATGTTGGAAC
1561 TCAGGCTTATT TCTGGAAGCT GAGAACTAA a stcgccaaag gttgtttctt ttgggtttt
1621 ggcaatytac agattctgg tggaaacaaagc agagagagag ggataaaagag tttaaatgtat
1681 aaaaatgtt tggcaaaaaa aaggcataat ttcaatttttggccaaagac acttttactg
1741 taaaggaggg tttaactcttgg tgagggttg ttgtttgaaa ttgtttctgc
1801 ttgatggatc atattttgtt accttattta ttgtatcaat ttgttttag aaaaaaaaaaa
1861 aaaaaacaat agccgtgaac atgagatgtaa tttaaaaaga taatcatggcc tttaaccctc
1921 tattttttgg actccatgtaaac atgagatgttcaat agagaaat tagagaaattt gtaccaagca
1981 aacacggccat stagtgtttt aacatccat gtcattcga cctayacaaa tacactttatg
2041 acttcagaaa atttgcata attttatata ttaaccaatgttcaaga

```

Sequences of 5' leader, 3' trailer, and introns (when applicable) are printed in lowercase.

FIGURE 4 (contin.)

9/10

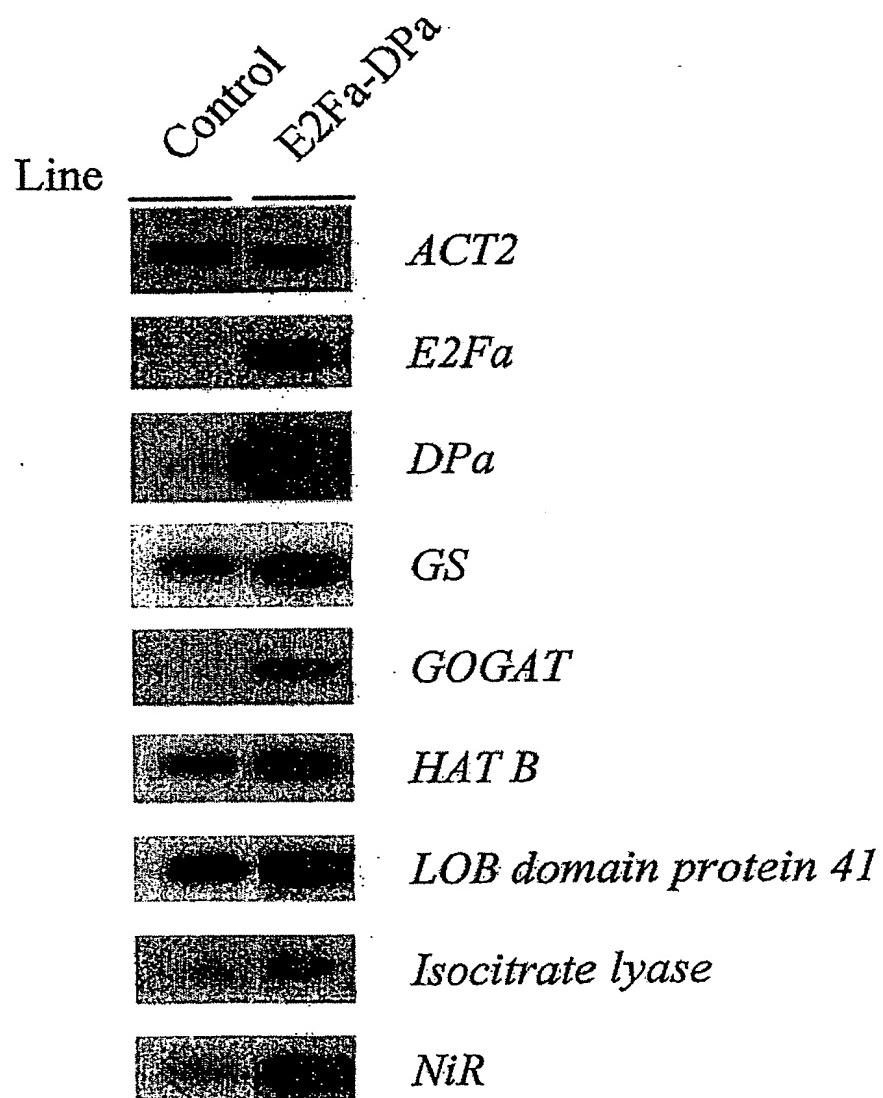


FIGURE 5

10/531475

WO 2004/035798

PCT/EP2003/011658

10/10

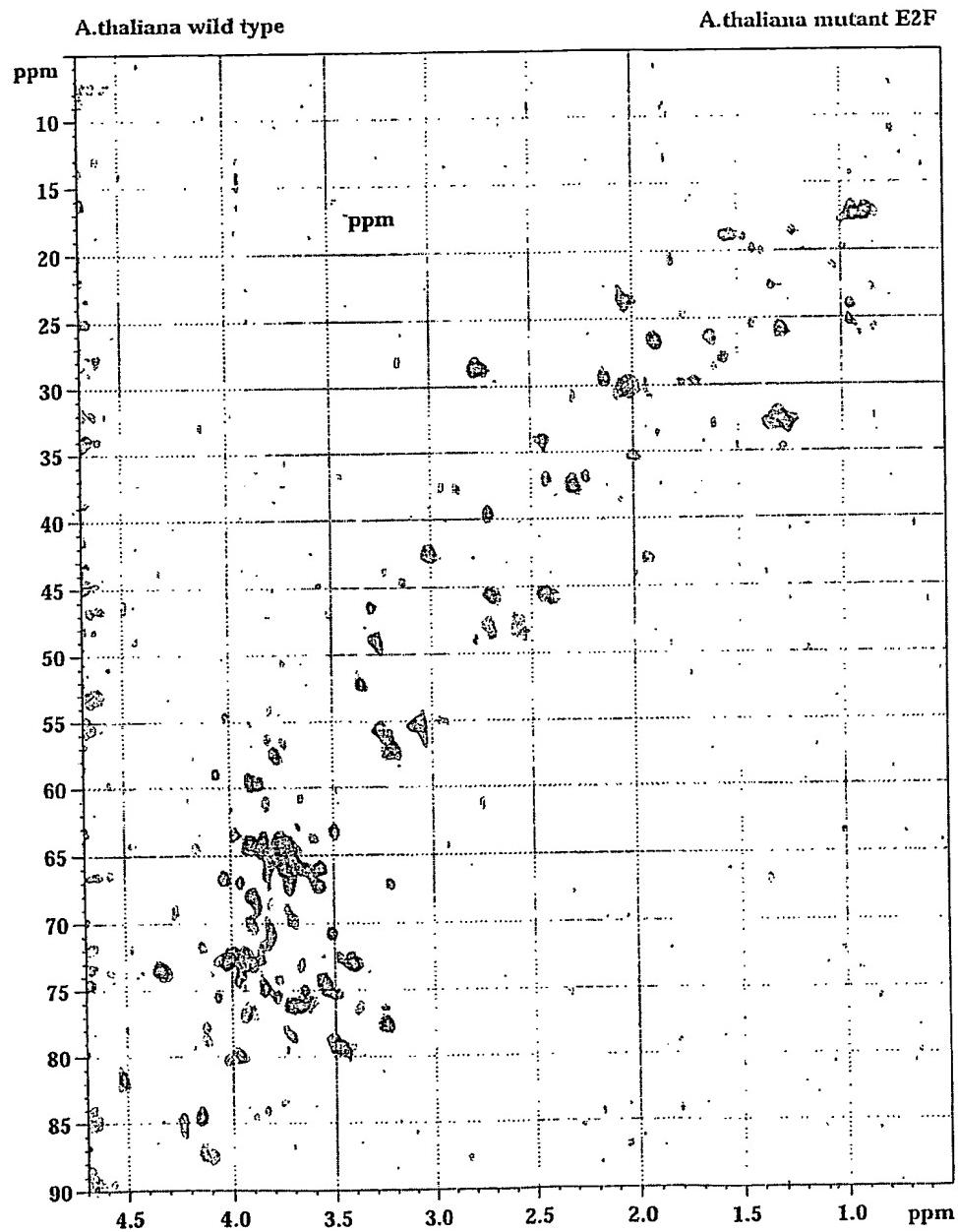


FIGURE 6

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- BLACK BORDERS**
- IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- FADED TEXT OR DRAWING**
- BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- SKEWED/SLANTED IMAGES**
- COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- GRAY SCALE DOCUMENTS**
- LINES OR MARKS ON ORIGINAL DOCUMENT**
- REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.